

REMARKS

Claims 1-4 are pending.

Claims 1-4 stand rejected.

Claims 1, 3, and 4 have been amended.

Claims 5-22 have been added.

The specification has been amended to correct minor informalities. No new matter has been added.

Claim Rejections - 35 U.S.C. § 101

Claims 1-4 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter and as not being supported by either a specific asserted utility of a well established unity.

The July 5, 2006 Office Action (referred to herein as the “Office Action”), citing *State Street Bank & Trust Company v. Signature Financial Group, Inc.*, 149 F.3d 1368 (Fed. Cir. 1998), states that, “the claimed invention does not physically transform an article or physical object to a different state or thing, so to be eligible for patent protection, the claimed invention as a whole must accomplish a practical application.” Office Action, p. 3.

Applicants respectfully submit that the Claims 1-4 are directed towards statutory subject matter because, for example, claims 1-4 are directed towards consolidating multiple, physical models into a single, consolidated, physical model. The model is useful because, in at least one embodiment, the model “refers to a collection of rules that define the buildable configurations of one or more products.” Present Application, para. 10.

In *State Street Bank*, the District Court rejected claims in the 5,193,056 patent under 35 U.S.C. § 101. The Federal Circuit reversed the District Court. The Federal Circuit stated:

Today, we hold that the transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical

calculations into a final share price, constitutes a practical application of a mathematical algorithm, formula, or calculation, because it produces "a useful, concrete and tangible result"—a final share price momentarily fixed for recording and reporting purposes and even accepted and relied upon by regulatory authorities and in subsequent trades. *State Street Bank*, , 149 F.3d 1368 (Fed. Cir. 1998).

Similar to the claims in *State Street Bank*, claim 1 of the present application recites in part:

A method of using a computer system to consolidate multiple models, the method comprising:

combining the models into a single, consolidated model
that maintains a non-cyclic chain of dependencies among families and features of families.

Also similar to the claims in *State Street Bank*, claim 3 of the present application recites in part:

A computer system for consolidating multiple models, the system comprising:

a processor; and

a memory, coupled to the processor, having code stored therein and executable by the processor, the code comprising:

a model consolidation module to combine the models into a single, consolidated model that maintains a non-cyclic chain of dependencies among families and features of families.

Also similar to the claims in *State Street Bank*, claim 4 of the present application recites in part:

A computer program product having instructions encoded therein to consolidate multiple models, the instructions comprising code to:

combine the models into a single, consolidated model that maintains a non-cyclic chain of dependencies among families and features of families.

Thus, as in *State Street Bank*, claims 1-4 transform data, i.e. multiple models, into a useful, concrete, and tangible result, i.e. a consolidated model that maintains a non-cyclic chain of dependencies among families and features of families. Applicants respectfully submit that the present application clearly teaches the practical application of such consolidated model. For example, in at least one embodiment,

While it is convenient to have this logical separation of the configuration space for maintenance purposes it is often desired to provide a single unified model that represents the configuration space for the entire product. The resulting unified configuration model can then be used to answer any questions that one of the original models could answer and it will give the same result. Present Application, para. 15.

Accordingly, Applicants respectfully request withdrawal of the rejection.

Claim Rejections - 35 U.S.C. § 112

Claims 1-4 stand rejected under 35 U.S.C. § 112, first and second paragraphs. Applicants respectfully traverse the rejections.

I and II.

I. The Office Action states that “since the claimed invention is not supported by either a –specific and substantial – asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention. Office Action p. 4.

II. The Office Action also states that “Applicant has not in fact disclosed the practical application for the invention. *Id.*

Applicants respectfully submit that the present application teaches that a configuration model is clearly useful because, for example, in at least one embodiment a configuration model “refers to a collection of rules that define the buildable configurations of one or more products.” Furthermore, the present application specifically discloses that the consolidated model of claims 1-4 is particularly useful and **has practical application** because, for example:

While it is convenient to have this logical separation of the configuration space for maintenance purposes it is often desired to provide a single unified model that represents the configuration space for the entire product. The resulting unified configuration model can then be used to answer any questions that one of the original models could answer and it will give the same result. Present Application, para. 15.

Applicants also respectfully submit that the practical use of configuration models is well-known to those of ordinary skill in the art and is taught, for example, in U.S. Patent No. 5,825,651 entitled “Method and Apparatus for Maintaining and Configuring Systems”, which is cited in para. 4 of the Present Application.

III.

III. Claims 1-4 also rejected under 35 U.S.C. § 112, second paragraph, because “the limitation in the [independent claim] preamble[s] of “rules having a constraint that references a non-ancestral family of the constraint” can be interpreted to different ways. Office Action p. 5. Applicants have amended claims 1-4 to delete reference to “a non-ancestral family of the constraint.”

Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. § 112 based rejections.

Claim Rejections - 35 U.S.C. § 102

Claims 1-4 stand rejected under 35 U.S.C. § 102(b), as being anticipated by U.S. Publication No. 2002/0165701 to Lichtenberg et al. (hereinafter “*Lichtenberg*”). Applicants respectfully traverse the rejection.

Applicants respectfully submit that the claims, as amended, are allowable over *Lichtenberg* because, for example, *Lichtenberg* neither teaches nor suggests combining multiple models such that combining “the models into a single, consolidated model that maintains a non-cyclic chain of dependencies among families and features of families, wherein each model comprises only rules that define a non-cyclic chain of dependencies among families and features of families and at least one model includes a rule that causes a configuration conflict with another model.” Claims 1, 3, and 4. (emphasis added).

Lichtenberg teaches “combining two DAGs”. *Lichtenberg*, para. 0076. However, Applicants respectfully submit that *Lichtenberg* does not teach that one of the DAGs “includes a rule that causes a **configuration conflict** with another model” as required by claims 1, 3, and 4. (emphasis added).

Lichtenberg teaches that, “the step of selecting an alternative may comprise identifying Boolean variables relating to any other alternative(s) of the component and nodes … [and] in the DAG, identifying paths comprising such nodes.” *Lichtenberg*, para. 0096. “Such paths then may relate directly to “incompatible products” in that these products are no longer interesting.” *Id.* Subsequently, *Lichtenberg* teaches that, “If, during configuration, a selected alternative is not compatible with other, chosen alternatives, the step of checking the DAG may further comprise … .” *Id.*, para. 0102. “In this situation, the user may choose to actually enter or choose/select the selected alternative and then un-choose the or those alternative(s) which is/are not compatible therewith.” *Id.*, para. 0105.

Thus, Applicants respectfully submit that *Lichtenberg* teaches that during configuration a user’s particular selection can exclude other possible choices. In other words, selection of a particular component can exclude selection of other components.

First, Applicants respectfully submit that the alternative choices taught by *Lichtenberg* are within a single DAG. Claims 1, 3, and 4 recite “at least one model includes a rule that causes a configuration conflict with another model.”

Second, Applicants respectfully submit that providing for alternatives in a single configuration model is significantly different than having “at least one model [that] includes a rule that causes a **configuration conflict** with another model.” Claims 1, 3, and 4. A configuration alternative as taught by *Lichtenberg* relates to excluding one or more choices when another choice is made. For example, selection of the color ‘red’ excludes the selection of blue and any other color. Applicants respectfully submit that excluding alternatives when a configuration selection is made is significantly different than a rule that “**causes a configuration conflict**.” Claims 1, 3, and 4. A configuration conflict would exist in this example when one model allows the color ‘red’ and another model does not. Another example of a configuration conflict between two models is when a first model releases a buildable configuration of ENGINE 2 in MARKET 1, and a second model to be combined with the first model does not release ENGINE 2 in MARKET 1. Present Application, para. 55.

Accordingly, Applicants respectfully submit that *Lichtenberg* fails to teach or suggest that “at least one model includes a rule that causes **a configuration conflict with another model.**” Thus, *Lichtenberg* also fails to teach or suggest “combin[ing] the models into a single, consolidated model that maintains a non-cyclic chain of dependencies among families and features of families.” Claims 1, 3, and 4.

Applicants respectfully request withdrawal of the rejection of claims 1, 3, and 4. Applicants also respectfully request withdrawal of the rejection of claim 2 for at least the same reason as Claim 1.

Applicants respectfully submit that new claims 5-22 are allowable for at least the same reasons as claims 1, 3, and 4.

CONCLUSION

In view of the amendments and remarks set forth herein, Applicant respectfully submits that all pending claims are in condition for allowance. Accordingly, Applicant requests that a Notice of Allowance be issued. Nonetheless, should any issues remain that might be subject to resolution through a telephone interview, the Examiner is requested to telephone the undersigned at 512-338-9100.

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